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**Clinical management**

**OR leaders share their ideas for improving the preop process**

Does this sound like your facility? Patients’ paperwork is always complete and in the chart 24 hours before surgery. There are rarely delays or cancellations because patients aren’t adequately prepared for surgery. There’s complete agreement about which patients need to come in for an appointment before the day of surgery, and an anesthesiologist is always on hand to see them. Patients always receive thorough preoperative instructions and never get confused about which of their medications to take before surgery.

If this is the way things go in your facility, you need to write an article or give a talk about how you’ve done it.

If you are struggling with this process, you’re not alone. “It’s like peeling an onion,” says one OR director. “For every layer we tackle, we find another one underneath.”

In this issue, organizations share ideas for improving the preop process:

- OR managers share what they’ve done in their facilities (p 8).
- A hospital describes its Passport to Surgery, which helps organize the preop process (p 10).
- An expert from Johns Hopkins describes how his organization applies the literature and expert opinion on preanesthesia evaluation (p 11).
- Ambulatory surgery centers tell about how they coordinate preop assessments (p 27).

Next month, we’ll look at the role of automation in improving the preoperative process.

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**Technology trends**

**New artificial spinal disc has a learning curve, payment issues**

A new artificial spinal disc for patients with lower back pain is generating a buzz. In October, the Food and Drug Administration (FDA) approved the first disc of this kind, the Charité Artificial Disc, manufactured by DePuy Spine, Inc, Raynham, Mass.

This is the first of a wave of artificial discs for the lumbar and cervical spines that are expected to enter the market over the next decade as an alternative to spinal fusion. Unlike a spinal fusion, the artificial disc allows the spine to bend and twist after surgery.

Spinal surgery programs are gearing up for the new procedure, which has a steep learning curve for surgeons and requires new instrumentation and training for the staff. They also are investigating reimbursement for the procedure.

The disc consists of a plastic core of ultra-high molecular weight polyethylene sandwiched between 2 metal endplates made of a cobalt chromium alloy. The device helps restore the natural distance between the 2 vertebrae and preserves motion at the level where it is implanted.

The Charité disc was approved for
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in the *OR Manager* print version.
What can be done to improve the preoperative process? The process is critical to patient safety, the surgical schedule, and the facility’s financial well-being. Yet many surgical facilities struggle to assemble paperwork, identify which patients need to be seen before the day of surgery, determine what if any preoperative testing is necessary, and coordinate patient medication regimens. There are several reasons why the process is difficult:

- With the outpatient revolution, most patients, even those with complex medical conditions, are having surgery as outpatients or same-day admissions. In some places, 70% of surgery is outpatient. That means the preoperative process needs to be completed either before patients arrive or on the day of surgery.
- Medical regimens can be complex. Who should be getting beta-blockers before surgery? How will patients on anticoagulant medications be managed?
- Many players are involved. The surgeon needs to be sure the patient is ready for the procedure. The anesthesia provider must ensure the patient is a safe candidate for anesthesia. Nurses need to make sure nursing needs are assessed, patients and families are educated about their care, and documentation requirements are met.
- Regulatory requirements must be met, financial arrangements made, and charts assembled.

Though these steps are essential and the cost is high—estimated at $10 billion annually for the nation’s 30 million annual surgical cases—preoperative assessment doesn’t generate much revenue aside from the standard payments for surgery and anesthesia.

Also, though there are thousands of articles on preoperative evaluation, there is remarkably little evidence-based research. The American Society of Anesthesiologists (ASA), in developing its Practice Advisory for Preanesthesia Evaluation published in 2002, found over 1,200 articles, but fewer than 20 met criteria to be included in an evidence-based guideline. In fact, ASA decided to call its document an “advisory” rather than a “guideline” for that reason.

Sharing solutions
Organizations have come up with a variety of solutions for meeting preoperative needs. In this issue, we’ve gathered ideas from readers about how they’ve improved their processes. You can read about them starting on p 8.

We found no single model will work for every organization. One common thread—they rely on multidisciplinary collaboration and nurse and physician leadership.

One problem is the financial squeeze—too little reimbursement to support the preoperative work that is needed.

A new study could provide an argument for better payments.

In the study, David Glick, MD, of the University of Chicago, found that patients seen in a preop clinic before the day of surgery were much less likely to have their cases cancelled on the day of surgery—8% compared with 19%. That was true even though patients seen in the clinic tended to be sicker and have more complex surgery than patients who were not. The study was presented at the ASA meeting in October in Las Vegas.

Dr Glick says he hopes such studies will “open the eyes of government and private payers that presurgical evaluations are worth paying for.”

Automation could also help. As health care inches toward greater use of technology, efforts are evolving that could smooth the preoperative process. We’ll report on that in a coming issue.

Meanwhile, if your organization has had success with the preop process that you’d like to share, please contact me at ppatterson@ormanager.com.

—Pat Patterson

A study could provide an argument for higher payments.
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FDA issues new rule on tissue safety

The Food and Drug Administration (FDA) on Nov 18 issued its long-awaited third rule tightening oversight of the tissue processing industry. The final “good tissue practice” rule regulates manufacturing of human tissue products such as musculoskeletal grafts, corneas, and cellular therapies. The rule will be effective May 25.

Two earlier rules cover registration of tissue establishments and donor screening. The rules are intended to prevent incidents such as the 2001 death of 23-year-old Brian Lykins of Minnesota from an infection associated with a contaminated knee allograft.

The Lykins family has been “tireless in their advocacy for tissue safety,” the FDA’s director of biologics, Jesse Goodman, MD, said at a press conference announcing the rule. He noted that the rules are needed to keep up with rapid growth in the tissue industry. About 1 million tissue transplants were performed in 2004, a dramatic increase from 350,000 in 1990.

The rule requires manufacturers who recover, process, store, label, package, and distribute tissues to use safeguards to prevent introduction, transmission, or spread of communicable diseases.

Each step in the process needs to be controlled, the FDA notes. Among problems that can arise are errors in labeling, mix-ups of testing records, and failure to adequately clean work areas.

The rule does not require tissues to be sterile but says recovery and processing must be done in an aseptic manner. Any mix-ups of testing records, and failure to adequately clean work areas.

The rule requires manufacturers who recover, process, store, label, package, and distribute tissues to use safeguards to prevent introduction, transmission, or spread of communicable diseases.

The rule does not require tissues to be sterile but says recovery and processing must be done in an aseptic manner. Any tissue manufacturer that represents its processing methods as reducing the risk of disease transmission, inactivating pathogens, or sterilizing tissue must back that with “a fully verified or validated process,” the FDA says.

Impact on health care facilities

Hospitals and surgery centers that simply transplant tissue do not fall under the rule, Dr Goodman said. They would come under the rule only if they procure and “manufacture” tissue.

Two requirements are of particular interest to hospitals and surgery centers:

- tissue tracking
- adverse event reporting.

Under the tracking requirements, tissue manufacturers must label each piece of tissue with a distinct identification code for tracking purposes. (There is an exception for autologous or directed donations.) Manufacturers also must have a method for tracking the tissue from the donor to the “consignee” (generally the entity the tissue is distributed to, such as the health care facility or surgeon.) The FDA cannot mandate how tissue is tracked within a hospital or surgery center. Instead, it requires manufacturers to have a labeling method that “facilitates effective tracking.” For example, the label could say: “Important notice to end user: Please record this distinct identification code in your records and in the patient’s file.”

Separately, laboratory standards of the Joint Commission on Accreditation of Healthcare Organizations require keeping records allowing tissue to be tracked to the recipient.

The FDA says tissue tracking is needed to locate recipients in case contaminated tissue is discovered. For example, if an infection is traced to faulty tissue processing, the manufacturer would be able to contact facilities or physicians that received tissue from the same donor or lot.

Tissue manufacturers will have to investigate any adverse reactions involving a communicable disease that happen in tissues they have distributed. They must report to the FDA within 15 days any such event that is fatal, life threatening, or results in permanent functional impairment or permanent damage to a body structure or needs medical or surgical treatment.

The rule and Q&A are at http://www.fda.gov/cber/rules.htm#gtp
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How does SurgiChip work?

The SurgiChip system is expected to cost $20,000 to $60,000, depending on the size of the facility, and each tag will cost about $2 to $3, Dr Waxman says. The system consists of a tag, labeled with an integrated passive transponder; an encoder; a device that can read the chip; and a printer that encodes the tags. AMTSystems, Cheshire, Conn, developed the system’s software and will provide marketing assistance, says Dr Waxman. The software would be downloaded by each facility.

Using SurgiChip “will take a little longer for nurses” than the current surgical site confirmation system, but from the standpoint of safety, he says, “it will be well worth the time.” He estimates the whole process takes about 4 minutes.

“The surgeon reads the tag, positions the patient, scrubs, goes back to the OR, and instructs the assistant to take the tag off,” Dr Waxman says. “You can take the tag off before (final surgical) prep, but I recommend after.”

He says he has tested the equipment in his office and found the process works well. He now will do studies at 156-bed Jupiter Medical Center in Jupiter, Fla, to compare the efficacy of the chip and handheld readers. Dr Waxman, who is in a group of 13 orthopedic surgeons, says, “Some think it is wonderful, and some think it will slow things down. The majority feel it is a good idea.”

**Tags catch on**

SurgiChip’s FDA approval is the latest in a flurry of efforts to use RFID technology in health care for tracking medications, supplies, and equipment. Patient tracking can be done by wristbands, tags, and a chip inserted under the skin.

Earlier this year, the FDA approved RFID to track pharmaceutical drugs. By 2007, the FDA will require pharmaceutical companies to place bar codes or RFID chips on all hospital drugs.

The FDA also approved VeriChip for use in humans. The chip, made by Applied Digital Solutions, Delray Beach, Fla, is implanted under the patient’s skin to provide health care workers with medical record information, says spokesman Len Hall.

Later this year, a pilot study using RFID wristbands is expected to begin at 300-bed Valley Presbyterian Hospital in Van Nuys, Calif. Surgical nurses will use readers to scan patients with RFID wristbands before surgery to ensure the correct body part is operated on, says Irwin Thall, manager for RFID in health care with Precision Dynamics Corp, a San Fernando, Calif-based company.

—Jay Greene

Jay Greene is a freelance writer in St Paul, Minn.
Ideas for improving the preop process

Here’s what some facilities have done to make the day of surgery go smoother.

On-time paperwork

Everything but the update note to the history and physical (H&P) must be done upfront for patients to be scheduled as first case of the day at Rush University Medical Center in Chicago.

The H&P, consent, and required lab results must be received by 11 am on the day before surgery for surgeons with priority to receive their priority time slots and for surgeons without priority to be scheduled into the best remaining slots.

If the H&P, consent, and lab work are received after 11 am but before 4 pm, cases are scheduled into the remaining time slots.

If the chart requirements cannot be completed by 4 pm, the surgeon’s office must complete an “exception form,” says Kim Humbarger, RN, BSN, director for the Ambulatory Surgery and Postanesthesia Care Units.

The form explains why requirements could not be met, and when requirements will be completed on the day of surgery and by whom. Cases with exception forms are not scheduled as first cases.

The update note refers to the Medicare rule and Joint Commission standard requiring the H&P to be completed no more than 7 days before surgery. An H&P older than 7 days must have a note updating the H&P. Surgeons can document the update on the day of surgery. An H&P completed 30 days or more before surgery is considered too old to meet the requirement and cannot be updated with a note.

The preoperative clinic, staffed by 5 RNs and 3 clerical staff, screens 80 to 100 charts for outpatients and same-day admissions per day. In all, 600 to 700 nursing assessments are done by phone each month for patients scheduled to be admitted to the hospital after their procedure. Surgeons may schedule a preanesthesia evaluation at the clinic for patients considered at high risk, which averages 2 patients per day. Surgeons can also send same-day admission patients to the clinic for preop lab testing, the H&P, and consents if house staff are available. Preop open-heart patients, for example, usually are seen in the clinic. The visit ensures that a specimen is in the blood bank prior to the day of surgery.

Chief medical officer steps in

The chief medical officer (CMO) speaks with surgeons who do not have patients’ H&Ps and consent forms completed in a timely manner at Garden City Hospital in Garden City, Mich.

“We have a policy that all H&Ps and permits have to be on the chart by 11 am the day before surgery,” says Annette Krupa, RN, BSN, CNOR, director of surgical services for the 6-OR department. But the policy was not enforced until the new CMO came.

He asked Krupa to track cases that did not have an H&P completed on time. She had the unit secretary create a simple form to record the surgeon’s name, columns to check for incomplete paperwork (eg, H&P consents), the medical record number, and the date.

Krupa gave the logs to the CMO who visited the surgeons in their offices, showed them the logs, and stressed the importance of having the paperwork completed. Many of the logs were from the same high-volume surgeons.

“It’s made a huge impact. We went from about 75 a month in the spring to about 20 a month in October,” Myers says.

Justifying a preop clinic

A teaching hospital justified the cost of its preop clinic by figuring the financial impact of lost revenue from delays. The clinic is staffed primarily by advanced registered nurse practitioners (ARNPs).

“We went to the administration and said, ‘If we funded these ARNPs, it would be at least a win-win or a wash, or in the best scenario, we would make money,’” says Gail Avigne, RN, BA, CNOR, manager of the ORs and other departments at Shands Hospital of the University of Florida, Gainesville.

The cost-benefit analysis was described by Gordon L. Gibby, MD, an anesthesiologist at Shands in an article (Int Anesthesiology Clin. 2002;40:17-30). He argued that a preop clinic could improve the process by:

• reducing unnecessary lab tests and improving reimbursement for testing that was done through proper coding
• educating patients about preop instructions such as NPO status
• reducing variability in anesthesiologists’ decisions about day-of-surgery workups
• reducing the number of no-shows
• improving coding for comorbidities, which could lead to higher reimbursement
• making sure insurance verification is completed.

It’s easier to improve the process in a
Clinical management

The complexity of outpatients now is incredible.

“...We prioritize patients using the numbering system. Anyone who is scheduled for a level 4 procedure, we call to make sure they come in to see an anesthesiologist before the day of surgery,” says Kathy Cook, RN, nurse manager of the Perioperative Evaluation and Preparation (PEP) department at Christiana Hospital in Newark. Patients having level 1 to 4 procedures are screened by phone, starting a week in advance. Charts are filed by date in alphabetical order.

In the phone screening, nurses use the computerized assessment form, which is part of Cerner’s PowerChart. The system has “pull-forward” logic—if the patient was assessed 2 weeks ago, when the nurse opens the assessment form, the system pulls forward the patient’s history. “That way, if the patient forgets to mention medications they are on, you can remind them,” says Constance Przybylski, project manager for perioperative services.

Automatic alert

The system also automatically sends a note to the OR team alerting them to key factors about each patient, such as a body mass index (BMI) over 40, latex allergy, or a history of malignant hyperthermia.

The goal is to have all of the patient’s paperwork complete 24 hours before surgery. “The nurses have a calendar in the computer system that reminds them to look for what they have requested,” she adds.

If the H&P and consents are not on the chart, patients are not taken to the OR.

One of the facilities goes a step further—“If they are in our same-day surgery area or on the floor, they are not allowed to be transferred to the OR preop or holding area until we have all of those pieces in place, unless it is a trauma case,” notes Sarah Holton, RN, nurse manager for the main OR.

The medical communication form is sent to specialists when a consultation is requested. The form provides specific information about the patient’s medical problems and risks for perioperative complications. ♥

How are you improving your preop process?
If you’d like to share your successes, e-mail Pat Patterson at ppatterson@ormanager.com

preop clinic rather than getting every clinic and doctor’s office to adhere to the same process, Dr Gibby observed.

From studies dating back to the early 1990s, he figured that with a preop clinic, Shands might be able to save $15 per patient in lab costs, $30 in reduced delays, and $44 in reduced cancellations while gaining $27 in reimbursement. He estimated the clinic’s cost, which is primarily salaries, would be $41.45 per patient based on the 1999-2000 budget.

To fund the clinic, the administration agreed to a small increase in the OR charge.

“Many of our patients are ASA III and above,” says Avigne, referring to American Society of Anesthesiologists physical status. “The complexity of outpatients now is incredible, which justifies the need for a presurgical workup. It isn’t as difficult for the ASA Is and IIs, which you can screen over the phone.”

She estimates the 80% of patients having surgery in the main OR come to the presurgical clinic.

The clinic is open from 7:30 am to 6 pm and is staffed by 3.5 ARNP FTEs, 1 RN FTE, 3 clerical staff, and 2 medical assistants. The clinic screens 25 to 45 patients a day. The annual surgical volume is 14,000 procedures.

The clinic has gone from being a walk-in clinic to scheduled appointments, “which has been much more effective,” Avigne says.

Who should come to the clinic?

To decide who should come in for a preoperative appointment, Shands is introducing a “bubble sheet” filled out by the patient in the surgeon’s office. The sheet, which is a basic review of systems, has “bubbles” for patients to fill in, like a standardized test.

The nurse practitioners in the presurgical clinic will review the bubble sheets when calling the patients. They then see if patients fit protocols for preanesthesia evaluation developed by the nurse practitioners and anesthesia department. The protocols cover areas such as congestive heart failure, hypertension, diabetes, and angina. The protocols are posted on the hospital’s Intranet so they are readily available.

“If patients fall outside the protocols, the ARNPs call the anesthesiologist on call or the medical director,” Avigne says. "What they look for primarily is to make sure patients don’t need a cardiac or pulmonary workup.”

It’s important for patients at least to touch base with the clinic by phone, she adds. For example, a patient might check “no” to the question about high blood pressure on the bubble sheet. But if in the phone call, the nurse might find out the patient actually is on blood-pressure medication, which is why the patient thought he didn’t have high blood pressure.

Shands has started developing a web-based bubble sheet that patients may eventually be able to fill out online.

A smoother process

Christiana Care Health System in Newark and Wilmington, Del, has taken steps to smooth the preop process for its 4 surgical sites. Christiana Care has 2 hospitals and 2 attached surgery centers with a total of 55 ORs and 46,000 annual procedures. The steps include:

• a system for ranking surgical procedures according to risk, which helps determine which patients will be seen by an anesthesia provider before the day of surgery
• a computerized nursing assessment form
• a policy not to send patients to the OR if the H&P and consents are not on the chart
• a medical communications form for specialists to use in documenting their evaluation.

The ranking system classifies procedures 1-4, depending on their invasiveness. For example, a hemorrhoidectomy is a 1, and a craniotomy is a 4. The ranking plus the patient’s ASA status help to determine what type of assessment patients need.
Missing paperwork is a major cause of surgical delays—and regulatory headaches.

The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) and Medicare require that patients have in their charts before surgery a history and physical performed no more than 7 days before surgery. If the H&P was done 8 to 30 days prior to surgery, there must be documentation of an update.

Having the paperwork in order makes sense—clinicians need the latest information about the patient to plan care. But making this happen isn’t easy.

A Passport to Surgery is the solution for Franklin Square Hospital Center in Baltimore. The Passport is a comprehensive preoperative checklist that becomes a permanent part of the patient’s medical record. Patients are not taken to the OR until the Passport is complete.

Among boxes that must be checked are ones indicating that the H&P was completed in the proper timeframe and updated if necessary, lab work is complete with either normal or abnormal results, and the anesthesia consult is completed. A second page summarizes guidelines for the H&P and preoperative testing. (The Passport is posted in the OR Manager Toolbox at www.ormanager.com.)

“Now we can look at one piece of paper and see the whole status of events,” says Debbie Kisner, RN, PhD, CNOR, clinical administrator of the surgical service line. The hospital has 10 inpatient ORs, 5 outpatient ORs, and 2 cysto/endoscopy rooms and serves about 60 to 70 surgical patients a day.

No check, no go

The Passport has helped smooth out a previously uneven process. Before, some patients came to the preoperative holding area without all of their lab test results or with abnormal results, and their surgery had to be delayed or canceled. Sometimes it was not clear whether an anesthesia consult had been requested or performed. Inpatients might arrive without documentation that they had received medications ordered by the anesthesia provider. The anesthesia provider might find out at the last minute that the patient had a pacemaker and have to start making calls to the company for the settings and other information.

The goal is to have the patient’s chart completed 72 hours before surgery. If the chart is not ready at that time, the physician’s office is notified. The chart is reviewed again at 48 hours and at 24 hours before surgery.

When the patient arrives in the holding area, each box on the Passport should have been checked for items required up to that point. One of the last boxes checked indicates that the surgeon has signed the surgical site. When that step is completed, the patient may be transported to the OR.

“If that check is not there, the patient doesn’t go,” says Chet Wyman, MD, anesthesiologist and member of the committee that developed the Passport.

Preop process

For outpatients, the Passport is placed on the chart either when a preoperative nurse calls the patient before surgery or when the patient comes in to the Preoperative Evaluation Center (PEC) for an appointment. For inpatients, the Passport is placed on the chart in the nursing unit.

The preoperative screening process begins as early as 2 weeks before surgery when nurses start phoning patients scheduled for surgery. Patients may have their history and physical and any testing performed either by their primary care physician or in the PEC by a physician assistant (PA). The PEC processes about 15 patients a day.

The hospital would prefer that patients come to the PEC, but that is not required, says Kisner. It can be harder to get the paperwork completed if the primary care physician does the screening.

Charts are reviewed before the day of surgery by a nurse or the PA and kept in a hanging file. There is a system for tracking which patients have been reached and which patients still need to be contacted. If nurses pick up on problems during the phone call, they alert the PA or call the patient’s primary care physician.

If information is not current, they call the surgeon. They also review lab and ECG results to decide if an anesthesia consult is warranted.

Preoperative testing follows guidelines developed by the anesthesia department, which are based on the patient’s medical history, age, and medical problems. For patients with no significant medical history, the guidelines call for:

- no testing for patients under age 50
- type and screen if ordered
- hemoglobin and hematocrit if anticipated blood loss is >500 mL
- serum or urine HCG test if pregnancy is suspected and documented.

For patients with medical problems, required tests are listed in a grid on the second page of the Passport.

A guiding question

The Passport is the result of a quality improvement project carried out by a team of physicians; nurses; anesthesia providers; and personnel from preadmission testing, central supply, surgical care units, and the operating room.

The team was guided by a question: What are the reasons patients are not ready for surgery on time? They analyzed each of the reasons and included them on the document that became the Passport to Surgery.

The JCAHO praised the Passport during the hospital’s regular 3-year survey in March. Kisner says, “Surveyors liked the 2-page form. It was easy for them to see that everything had been checked off and that someone really did review all of these things.”

Fewer bottlenecks

Compliance with chart completion is slowly improving, Kisner notes. The number of charts ready at 72 hours and 48 hours is increasing, and the number not ready until 24 hours before surgery is dropping.

There are still delays, with surgeon lateness topping the list, she says. The OR committee is tracking that situation and considering how to address it.

To help alleviate bottlenecks in the holding area when everyone arrives at the last minute, the OR introduced a timeline for the last half hour before surgery. For example, this is the timeline

Continued on page 14
An expert comments on the preop process

OR Manager interviewed L. Reuven Pasternak, MD, MPH, MBA, vice dean, Bayview Campus, Johns Hopkins Medicine, Baltimore. Dr Pasternak chaired the American Society of Anesthesiologists Task Force on Preanesthesia Evaluation and is author of review articles on preoperative screening.

How have you improved the process for preoperative evaluation at Bayview?

Dr Pasternak: Bayview uses a preoperative evaluation center (PEC) that is under the management of senior clinical nurses. Bayview has 10 ORs and a surgical volume of 8,000 patients a year. Administratively and clinically, the nurses run the clinic under the direction of an anesthesiologist who is a medical director but who is not on site.

We used to have a physician on site who was assigned as medical director. But we found that as the nursing staff became familiar with anesthesia protocols and issues, we really didn’t need a physician on site. The nurses were able to address those issues with physician backup.

Over the 10 years Bayview has used this process, case cancellations for elective patients caused by incomplete paperwork have improved dramatically from 17% to essentially zero.

The only cancellations we have now are situations where a patient violates basic issues like NPO, or a surgeon may decide surgery is no longer necessary for clinical reasons. The process also has helped reduce unnecessary preoperative testing.

Please describe the process for preanesthesia evaluation at Bayview.

Dr Pasternak: The PEC is the focus for gathering all of the clinical information about the patient before surgery.

When a surgeon schedules a case for the OR, we have a posting sheet, which is the way the PEC is made aware of a patient being scheduled. We did this so the surgeons do not have to make 2 phone calls to start the process.

The nursing staff contacts the primary care provider to advise them that the patient is scheduled for surgery and asks that information be provided to us.

We have a form physicians can use to provide that information. But we also accept information on their forms, provided they answer all of the questions of concern to us. Many offices deal with multiple hospitals. Allowing the offices to use their own forms is friendlier to them and makes it easier to get the information. We would rather do it that way and transpose the information on to our forms if necessary.

Our form includes check-offs related to the patient’s medical status, allergies, medications, past surgery, and special issues. The nursing staff reviews the forms for tests and consultations needed. This information is kept in a folder for each patient. Each day, the information is reviewed by an attending anesthesiologist who determines whether additional information is necessary. If it is, the PEC staff call to get the information.

Preop clinics are not revenue generating. How did you justify your clinic?

Dr Pasternak: We were lucky because our hospital was willing to support this enterprise. We were able to demonstrate that the clinic does generate revenue indirectly because it helps eliminate cancellations. It also makes for a more efficient process in the OR because the anesthesia staff doesn’t have to spend as much time chasing down information on the day of surgery.

How many patients do you see in the clinic before the day of surgery?

Dr Pasternak: About one-fourth come in prior to the day of surgery. We make this service available to anyone who requests it. We don’t bill for it.

The criteria for who comes in are based more on medical acuity than the invasiveness of the surgery. Usually, it is patients who have had major ongoing medical problems or who have known airway difficulties. Coming to the clinic also ensures that all of our forms are filled in to minimize the chance of anything going wrong on the day of surgery.

We have done informal surveys of other academic and private practice institutions and found that 20% to 33% of patients come in for an evaluation before the day of surgery.

How do you decide which patients need to come in before the day of surgery?

Dr Pasternak: That question caused the most controversy when we developed the ASA Practice Advisory. [The advisory, published in 2002, represents expert opinion on preanesthesia evaluation.]

Different anesthesiologists from different parts of the country had very different perspectives on what needed to be done. Some worked in environments where the continuity of care or the primary care system was very poor. They felt the advisory needed to give them the leverage to require patients to come in, which was the only way they felt comfortable they would get the necessary data. Then you had the other extreme where surgeons and anesthesiologists work closely together, and there was no reason to require anyone to come in.

That is why the Practice Advisory does not state specific conditions for which patients have to come in before the day of surgery.

The one thing we state emphatically is that regardless of whether patients come in or not, we need certain information prior to the day of surgery to provide anesthesia safely. Then you need to develop a system that works for your area.

How do you handle specialty consultations?

Dr Pasternak: The first thing we did was to reduce the scope of the problem. We have found the number of specialty consultations has decreased significantly. The first researchers to look at this were Stephen Fischer and his group at Stanford.

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Clinical management

Continued from page 11

They found that by having the information reviewed by staff, they were able to reduce referrals to cardiology and pulmonologists. That is because the nurse understood the anesthesia staff’s criteria and were able to determine that they had the information needed and didn’t need additional testing.

The second thing we did was to have the PEC staff request the consultation when necessary. If a patient is referred from a private physician, we ask if the physician has a cardiologist he or she prefers us to use. If not, we refer the patient to our cardiologist for an assessment.

Do you have a standard form you ask consulting physicians to complete?

Dr Pasternak: We have a standard form that we supply on request, but we don’t require that it be used. We phrase the question in such a way that we will get the information needed rather than just a small slip saying, “cleared for anesthesia.” We identify the medical problem and ask: “Is this problem as stable as reasonably possible in preparation for surgery?”

Do you have sanctions to encourage physicians to get paperwork in on time?

Dr Pasternak: We have considered the possibility of automatic cancellations if patients don’t have absolutely everything needed on the chart. But we haven’t gone to that. In cases when a lab value may be missing, the anesthesiologist and nurse will review it. We have found overwhelmingly that there really wasn’t a reason to think the patient was going to have an abnormality that was going to cause a cancellation or change in management during the perioperative period. So we thought, “Why punish the patient?”

We do allow for patients to get blood work done on the day of surgery. We require them to come in a bit earlier, and we have not had problems. It is pretty infrequent, so we haven’t taken as rigid an approach as we might have.

Would you please summarize the current thinking on preoperative testing?

Dr Pasternak: The recommendation is that preoperative testing should be done only on the reasonable expectation that:
  • the patient has a specific medical condition that is of concern for safety during the perioperative period
  • testing would yield information that might affect management of the patient by the anesthesiologist or the surgeon

In the ASA Practice Advisory, we state there is no evidence to support a minimum age for a baseline ECG. An ECG may be indicated for patients with known cardiovascular risk factors or for patients with risk factors identified in the preanesthesia evaluation. If someone felt they needed a cutoff age, we say age 50, but that is very soft. There is no evidence to support that.

The most controversial issue of all was pregnancy testing. There is no evidence to suggest that anesthesia in and of itself would cause a woman to have problems in early pregnancy. The literature shows that routine pregnancy tests are positive in 0.3% to 2.2% of cases and lead to delays or cancellations of surgery in 100% of cases where pregnancy is found.

The Practice Advisory recommends that “pregnancy testing may be offered to female patients of childbearing age and for whom the result would alter the patient’s management.” That may sound like mumbo-jumbo, but there are a lot of social issues that come into play as well as medical issues. [For a discussion of pregnancy testing, see August 2003 OR Manager, p 28.]

How do you see the role of nurses in preanesthesia evaluation?

Dr Pasternak: I think they have a huge role to serve, both in the clinical and administrative realm. From the administrative side, they do a superb job. From the clinical standpoint, they have the knowledge base and skills to do the assessment and ask for support from the anesthesia staff. I think that is the universal view of the physician staff with whom we deal.

What were the major challenges in implementing your system?

Dr Pasternak: I think the hardest part was educating physicians outside of our immediate environment. Some have a high turnover of personnel in their offices, so it is a constant exercise. It took 2 to 3 years to get to the point where we had a critical mass of people in other locations who were familiar with our system and our criteria. It takes a while for them to understand that anesthesia issues are distinct from surgeons’ issues. It is a different set of information that is required.

References


Clinical management

**Johns Hopkins consensus on preoperative evaluation**

With the shift to outpatient surgery and same-day admissions, as many as 90% of patients arrive at the facility on the day of their surgery. More complex surgery is being done in the outpatient setting, and even patients with fairly serious health problems are having surgery on a same-day basis.

This makes the preoperative process harder to coordinate, and it is more difficult for nurses and anesthesia providers to get the information they need about patients before surgery. There also is a wide variation in preoperative testing practices.

Seeing the need for a framework for this process, a consensus group at Johns Hopkins developed guidelines on preoperative evaluation, an effort led by anesthesiologist L. Reuven Pasternak, MD. Dr Pasternak also chaired the task force that developed the American Society of Anesthesiologists (ASA) Practice Advisory for Preanesthesia Evaluation.

The Johns Hopkins guidelines used an empirical approach because definitive studies are still lacking, he says. The guidelines rely on ASA physical status as well as a surgical procedure risk classification system developed by the Johns Hopkins group. Procedures are classified from Levels 1 to 5 according to risks independent of the patient’s underlying health status or type of anesthesia, such as blood loss and invasiveness. The ASA status plus the surgical risk are combined in a matrix to indicate whether patients should have a preoperative evaluation on the day of surgery or before the day of surgery by a primary care provider or by an anesthesia provider.

These tables are from the Johns Hopkins guidelines.

### Conditions for which preoperative evaluation is recommended prior to the day of surgery

**General**
- Medical condition inhibiting the ability to engage in normal daily activity
- Medical conditions necessitating continual assistance or monitoring at home within the past 6 months
- Admission within the past 2 months for acute condition or exacerbation of chronic condition

**Cardiocirculatory**
- History of angina, coronary artery disease, myocardial infarction
- Symptomatic arrhythmias
- Poorly controlled hypertension (diastolic >110, systolic >160)
- History of congestive heart failure

**Respiratory**
- Asthma/chronic obstructive pulmonary disease requiring chronic medication or with acute exacerbation and progression within past 6 months
- History of major airway surgery or unusual airway anatomy
- Upper and/or lower airway tumor or obstruction
- History of chronic respiratory distress requiring home ventilatory assistance or monitoring

**Endocrine**
- Non-diet controlled diabetes (insulin or oral hypoglycemic agents)
- Adrenal disorders
- Active thyroid disease

**Hepatic**
- Any active hepatobiliary disease or compromise

**Musculoskeletal**
- Kyphosis and/or scoliosis causing functional compromise
- Temporomandibular joint disorder
- Cervical or thoracic spine surgery

**Oncologic**
- Patients receiving chemotherapy
- Other oncologic process with significant physiologic residual or compromise

**Gastrointestinal**
- Massive obesity (>140% ideal body weight)
- Hiatal hernia
- Symptomatic gastroesophageal reflux

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Recommended laboratory testing

These tests are those required for administration of anesthesia and are not intended to limit those required by surgeons for issues specific to their surgical management.

Electrocardiogram
- Age 50 or older
- Hypertension
- Current or past significant cardiac disease
- Current or past circulatory disease
- Diabetes mellitus (age 40 or older)
- Renal, thyroid, or other metabolic disease
- Procedure Level 5

Urinalysis
- Diabetes mellitus
- Renal disease
- Genitourlogic procedure
- Recent genitourinary infection
- Metabolic disorder involving renal function
- Procedure Level 5

Complete blood count
- Hematologic disorder
- Vascular procedure
- Chemotherapy
- Procedure Level 4

Coagulation studies
- Anticoagulation therapy
- Vascular procedure
- Procedure Level 5

Procedure Level 4
Highly invasive procedure with blood loss >1,500 cc; major risk to patient independent of anesthesia.

Includes: Major orthopedic-spinal reconstruction, major reconstruction of GI tract, major genitourinary surgery such as radical retropubic prostatectomy, major vascular repair without postoperative ICU stay.

Procedure Level 5
Highly invasive procedure with blood loss >1,500 cc; critical risk to patient independent of anesthesia; usual postoperative ICU stay with invasive monitoring.

Includes: Cardiothoracic procedure; major procedure on oropharynx; major vascular, skeletal, neurologic repair.


A copy of the Johns Hopkins consensus guidelines, with the matrix and surgical risk classification, is available by e-mailing Dr Pasternak at reuvenpast@msn.com

CMS plans to revoke ban on hand sanitizers in exit corridors

The Centers for Medicare and Medicaid Services (CMS) plans to lift a prohibition on placing alcohol-based hand sanitizer dispensers in exit corridors, according to a letter from CMS to the Association for Professionals in Infection Control and Epidemiology (APIC) announced Nov 17.

The letter said CMS has prepared an interim final rule with comment period, scheduled to be published in the Dec 23 Federal Register. If published on that date, the rule would be effective Feb 25. Until then, current regulations remain in effect.

APIC wrote CMS in September, asking the agency to revoke its policy that considered the alcohol-based rubs a fire hazard. APIC referred to studies proving the containers could safely be placed in exit corridors, adding that ready access to hand sanitizers is needed to improve compliance with hand hygiene recommendations.

Until the rule is in effect, APIC says infection control professionals should contact their local jurisdictions if their facility is cited for having dispensers in corridors. Though states vary in their approach, CMS recommends that if facilities are cited for this deficiency, they should request a “temporary waiver” from enforcement action in their plan of correction. 

—www.apic.org
OR Business Management Conference

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A two-day conference plus all-day preconference seminars for OR professionals concerned with the business management of the OR.

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Cost Management
use in patients who have degenerative disc disease at 1 level in the lumbar spine (from L4-S1) and who have had no relief from low-back pain after at least 6 months of nonsurgical treatment. The Charité disc has been used in patients in Europe for more than 17 years and is in use in more than 30 countries.

Orthopedic and neurosurgeons and medical device companies say artificial discs have strong potential because patients recover more rapidly and have more freedom of movement.

Three more discs with slightly different designs are expected to become available in the next couple of years. Artificial discs are projected to generate billions of dollars in revenue for medical device companies.

“Many enthusiasts for the artificial disc point to an increasing market for patients who will be eligible for spine surgery. Some who may not have been eligible for a fusion in the past may now qualify for a disc replacement,” says Stan Mendenhall, editor and publisher of Orthopedic Network News, Ann Arbor, Mich, a long-time observer of spinal procedures, having done several hundred cases,” he says.

Questions remain about artificial discs, he adds, including how long the implants will last and how well the procedure will be reimbursed.

How the disc is implanted

Implantation of the artificial disc is much more difficult than a fusion and should be performed only by the most experienced spine surgeons, says Fred H. Geisler, MD, PhD, a neurosurgeon at the Illinois Neuro-Spine Center, Rush-Copley Medical Center, Aurora, Ill, one of the lead researchers in the FDA trial. He has implanted more than 100 Charité discs in the past 4 years.

“We are recommending that surgeons be experienced with anterior spinal procedures, having done several hundred cases,” he says.

Complications can occur in the initial cases as a result of the disc not being seated properly, and the surgeons must go back and readjust it. There also can be nerve root injury or temporary nerve paralysis because of distraction of the disc space when the surgeon is preparing the vertebral bodies for the endplates and inserting the device.

Overall, the complication and reoperations rates with the Charité disc were no higher than with the BAK fusion control group, he says.

The disc is placed anteriorly through a 3-in to 6-in incision just below the navel, depending on the patient’s size. Because the disc is inserted in the anterior column in the disc space, there is no way of placing it posteriorly, notes Dr Geisler. The anterior approach also is key to the quick recovery because when the back muscles are severed, as they are in a posterior lumbar fusion, it takes them 3 months to rebind to the bone.

The procedure involves a complete discectomy of the diseased disc and meticulous bone preparation for the endplates. Special attention must be paid to placing the implant’s endplates so they are parallel.

A set of custom instruments, which Dr Geisler helped develop, is used for cleaning the disc space and placing the implant. New instruments are needed because a discectomy is not normally performed from the front, and the surgeon must scrape the bone with a different type of precision, he explains.

In the clinical trial, the rates of adverse events from use of the artificial disc were comparable to those from conventional fusions. The trial involved 375 patients at 15 centers. After a 2-year follow-up, patients who received the artificial disc had similar outcomes to patients treated with anterior lumbar fusion.

With FDA approval, Dr Geisler expects the clinical inclusion criteria to broaden beyond the strict criteria used in the trial (sidebar), expanding to 2-level disc disease. But patients with spinal diseases such as osteoporosis, which can weaken the spine, and patients whose spines are severely damaged probably never will be eligible for the artificial disc because the spine would be too weak to hold the device.

Postoperative care is similar to that for abdominal surgery. Artificial disc patients don’t have a bone graft incision to recover from, and they don’t need a brace. They are not limited in mobility other than by their abdominal incision.

The hospital stay after an artificial disc procedure is about 4 days, whereas fusion patients are in the hospital about 5 days. Disc patients typically return to work in 4 to 12 weeks, while fusion patients usually do not go back to work for 4 to 6 months.

Training for surgeons

Only a few dozen surgeons in the US are qualified to implant the disc.
presently, though DePuy Spine’s parent company, Johnson & Johnson, plans to train about 2,500 surgeons during the next year. Currently, 15 centers in the US offer artificial disc replacement, but many more are expected to join in the next several months as surgeons are trained.

Surgeons attend a 2-day course at the DePuy Spinal Institute in Cincinnati. Surgeons who were involved in the FDA investigations participate in the training, which is both didactic and hands on. Afterward, newly trained surgeons visit and observe the investigational surgeons. The investigational surgeons then observe and assist the newly trained surgeons on their first cases.

“This is a brand-new technique, and we are trying to roll it out in a responsible manner,” says Dr Geisler.

Johnson & Johnson currently does not have training sessions for nursing personnel.

Getting ready

HealthEast, a Minneapolis-based health system, expects its surgeons to perform their first Charité artificial disc cases within the next month. HealthEast’s surgeons were in the first group of surgeons being trained in December. The hospital and physicians already have been receiving phone calls about the procedure and have patients waiting, says Julie Blatnik, RN, BSN, CNOR, the system’s program director for spine care.

Blatnik has talked with Johnson & Johnson about setting up a program at their hospital to train the nursing staff and physician assistants.

“The success of our program will be greatly influenced by the training of our nurses as well as surgeons,” she says. Because of the learning curve associated with the procedure, she plans to assign the same nursing personnel to work with the surgeons for their first 10 cases.

HealthEast is working on a contract with DePuy Spine on the cost of the implant. The company has proposed to provide the custom instruments if the hospital purchases a certain number of discs. This is similar to contracts for total joint replacements in which the instruments are provided with the implants.

Costs and reimbursement

HealthEast is beginning to talk with payers about coverage of this new procedure. A DePuy reimbursement specialist is working with them and has met with personnel from physicians’ offices and the hospital’s coding and billing staff, and the person who negotiates insurance contracts.

The cost of the surgical procedure plus implant is between $35,000 and $45,000, according to the Wall Street Journal. The list price of the three components of the disc is $11,500, says Blatnik.

Kathy Killeen, HealthEast’s orthopedic service line manager, thinks more insurance companies will begin to cover the procedure because patients are in the hospital a shorter time, and recuperation time is about half as long as that for spinal fusion.

Medicare presently covers the procedure under DRG 499 and 500 (back and neck procedures except spinal fusion), with a payment of between $4,700 and $7,200, which is less than the device alone. Killeen thinks the artificial disc warrants a DRG of its own. It has been given an ICD-9-CM procedure code.

Killeen says HealthEast is fortunate to have surgeons who are careful in patient selection and who make sure there is insurance coverage before they perform the procedure.

“Tt think it is fair to say that what is going to happen to reimbursement is not really worked out at this time,” Dr Geisler says. He notes the hospital was reimbursed during the FDA trial, and he is optimistic about receiving reasonable reimbursement for his future cases. He adds that he has a long list of patients waiting for the artificial disc. If their insurance will not pay for the procedure or they are unable to pay for it themselves, they will need to be treated with other methods.

How many fusions will be replaced?

The extent to which artificial disc replacements will replace spinal fusion

Continued on page 18
Technology trends

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procedures has been estimated to be between 0% to 50%, "with the higher estimates coming from those who have the most to gain from introducing new discs," Mendenhall comments.

Industry analysts estimate that in 2005, the percentage of patients who may receive an artificial disc instead of fusion, will be less than 10% of fusion cases. About 200,000 lumbar fusions are performed each year in the U S.

Dr Geisler predicts that in his practice, the disc will replace 10% to 15% of fusion cases. He says his personal results are better with the Charité artificial disc than with fusion in patients who meet the FDA trial criteria.

Long-term issues

How well will artificial discs hold up?

Revision surgeries after artificial discs have been rare in Europe where large numbers of patients have had the procedure and there are many years of experience, says Dr Geisler.

An FDA panel, while unanimously endorsing the Charité disc in June 2004, expressed several concerns, which Mendenhall says also were discussed at the meeting of the North American Spine Society this fall:

- how long the discs will last
- the ability to perform successful revision surgery
- prevention of adjacent segment disease.

Because the average age of a lumbar disc replacement patient is 35 years, the discs need to last 40 years. Some experts think there is no long-term survivorship data on polyethylene, and that it could fail, he notes. Another concern is particulate debris.

“We know about wear debris in total joints, and it took manufacturers 10 years to figure out that the plastic that came off from the metal rubbing against the head was causing some osteolysis and loosening of the stem,” says Mendenhall.

In a long-term laboratory test of cyclical motion simulating more than 11 years of use with the Charité disc, no clinically significant wear debris particles were identified.

Revision surgery for artificial discs is complex, and there are questions about its safety. There have been 12 revisions performed in Europe, so they appear to be possible. Still, the FDA panel expressed concern.

Though it is believed artificial disc replacements, unlike spinal fusion, will not cause adjacent segment disease, panel members noted there was no evidence to support this belief.

—Judith M. Mathias, RN, MA

References

Geisler F H, Blumenthal S L, Guyer R D, et al. Neurological complications of lumbar artificial disc replacement and comparison of clinical results with those related to lumbar arthrodesis in the literature: Results of a multicenter, prospective, randomized investigation.


Have an idea?

Do you have a project or accomplishment you’d like to see reported in OR Manager? Send an e-mail with your idea to Pat Patterson, Editor, at ppatterson@ormanager.com.

CDC seeks comment on TB draft guidelines

The Centers for Disease Control and Prevention on Dec 6 issued a proposed revision to guidelines for preventing transmission of tuberculosis in health care settings. Comments are due by Feb 3.

For surgical suites, the CDC proposes that when possible, nonurgent surgery be postponed for patients with suspected or confirmed TB until the patient is noninfectious or no longer has TB.

When surgery cannot be postponed, it should be performed in a surgical suite with recommended ventilation controls, such as a room with reversible airflow that can be converted to negative pressure. In some cases, patients with TB may need to be scheduled as the last case of the day to allow time for airborne contaminants to be removed.

Surgical staff, especially those close to the surgical field, should use at least an N95 disposable respirator for cases with a patient with suspected or confirmed TB, the draft says. Respirators with valves or positive pressure are not recommended because they do not protect the sterile field.

If the OR has an anteroom, that should either be in positive pressure relative to both the corridor and OR, or it should be in negative pressure relative both to the corridor and OR. If the OR does not have an anteroom, the OR door should be kept closed and traffic minimized in and out. The draft also proposes using additional air-cleaning technologies such as HEPA filters or ultraviolet light.

The draft proposes placing a bacterial filter on the patient’s endotracheal tube or the expiratory side of the breathing circuit.

The draft revision is the first since 1994. The CDC says the number of outbreaks in health care settings has declined since the previous guidelines were issued. An upsurge of cases reported in the early 90s also has been reversed. But the decline from 2002 to 2003 was the smallest since 1992. —www.cdc.gov/nchstp/ib/Federal_Register/default.htm
Please see the ad for SKYTRON INC. in the *OR Manager* print version.
Questions managers ask on patient flow

Patients backed up in the emergency department (ED). Ambulances on diversion. Patients “boarding” in the postanesthesia care unit (PACU). What does this have to do with the elective OR schedule?

A lot, as it turns out.

An elective surgical schedule that is heavy on some days and light on others can cause peaks and valleys in the demand for postoperative beds. This variability actually has a bigger impact on ED diversions than the random variability caused by emergencies.

For example, if an OR does a high volume of open-heart cases on Tuesday and Wednesday, those patients go to the ICU postoperatively. If the ICU is full, there is no room for emergency cases, and the ED might have to go on divert.

Researcher Eugene Litvak, PhD, of Boston University has demonstrated that variability in the elective surgical case-load puts more strain on the system than random emergencies.

The Institute for Healthcare Improvement, Boston (IHI, www.ihi.org), has led a project to help hospitals address patient-flow issues by applying Dr Litvak’s findings. Speakers discussed the IHI project at the Managing Today’s OR Suite conference in October in Chicago. They also responded to OR managers’ questions. Speaking at the conference were Marilyn Rudolph, RN, BSN, MBA, a faculty member for the IHI project and vice president for patient improvement for VHA Pennsylvania, Pittsburgh, and Christy Dempsey, RN, BSN, CNOR, vice president for perioperative services at St John’s Regional Health Center, a Level I trauma center in Springfield, Mo. St John’s participated in the IHI project and has implemented some of Litvak’s findings, including an add-on OR for urgent and emergent cases (sidebar).

In an overstressed OR, an add-on room can reduce variability by separating the flow of urgent cases from elective ones.

Here are questions OR managers asked about managing patient flow.

Q How do you get started with smoothing the flow of elective cases? Revising blocks is difficult enough as it is.

Dempsey: The first step is to be sure you have adequate policies and revise your blocks frequently. You can’t smooth the flow of cases, and you don’t know if you need an add-on room unless you are revising blocks regularly. This needs to be done about once every quarter, or once every 6 months at least, based on block utilization alone.

Then you need to make sure you have optimized the utilization of your blocks. Probably everybody has peak days in surgery at the beginning of the week so they can get their inpatients home by the weekend. If you are talking about smoothing the flow throughout the week or perhaps capping the number of total joints you do, say, on Tuesday and Wednesday, that will affect everybody’s block. Unless your surgeons are accustomed to having their blocks adjusted based on their utilization, this is going to be a huge change. If it’s routine to tweak blocks, this is going to be more acceptable.

Rudolph: I would add that all of these decisions must be based on data. I can’t stress enough the importance of good, clean data on block utilization. You will still be challenged, especially if you are making adjustments for the first time. Give the surgeons a chance to react to it. Then have your parameters and guidelines to guide your decisions.

Q We are doing our inpatient surgeries on Monday and Tuesday and our outpatients on Thursday and Friday. This can cause peaks in volume in the postop units. Yet we don’t want to move the inpatients to later in the week because ancillary services like physical therapy are not available on weekends. What can we do about this?

Rudolph: There are two choices. First, if the hospital feels it can’t have ancillary services available 7 days a week, and they’re going to continue to schedule as they currently do, they need to designate more inpatient beds and staffing for those patients during the week. The second choice, which I advocate, is to try to smooth the surgery flow across the week and provide the ancillary services 7 days a week.

Q For your add-on room, what definitions do you use for urgent and emergent cases? How do you enforce this?

Dempsey: If you are going to have an add-on room, you have to have definitions for what can be done in that room. Our definitions are:

- emergent: threat to life or limb; done in next available OR
- priority: need an OR within 2 hours
- urgent: need an OR within 6 hours
- all other cases: can be done within 24 hours

In addition, if a physician calls and needs to post a case for any other time frame, we write that on the schedule. For example, if a surgeon posts a case that needs to be done within 4 hours, and we have not been able to get the surgeon a room within 3 ½ hours, that case becomes a priority and gets the next room available.

If anyone tries to game the system, that information is taken to our Perioperative Services Guidance Council. The council is chaired by the chairman of the Department of Surgery and the director of perioperative services. The members include 5 surgeons and all managers from perioperative services. It is a very strong committee that meets every 2 weeks. The council decides whether the case prioritization was appropriate. If it was not appropriate, as deemed by physician peers, the surgeon gets a letter, gets counseling, or at the extreme, loses privileges. We never have had to take away privileges for that reason.

We’ve talked to hospitals all over the country about this, and there seem to be 2 common obstacles:

- The OR committee is not strong and does not meet often enough.
- The OR is not revising the blocks often enough.
Q What metrics do you use to monitor the utilization and outcomes for the add-on room?

Dempsey: We look at the utilization of that room the same way that we look at block utilization in general. Utilization of the add-on room is about 60%, which allows for flexibility. We define block utilization as the case time within the blocks (patient in to patient out of the room plus turnover time) divided by the available block time. We generally revise the blocks about every 4 months. We also look at overtime; the number of rooms we need at 3, 5, 7, and 11 pm; the surgical volume; and our throughput during the business part of the day.

Our overtime in the OR is 2.8%, which is low. Our volume has grown, and our overtime continues to stay low. And we run only half the rooms after 3 pm that we were running 2 years ago. So those things help us know we are successful.

Q When you have a room set aside for add-ons, how do you make sure you have staff who are competent for the kinds of cases that are going to be assigned to that room?

Dempsey: We trade those people out based on the cases we get for the add-on room. For example, if you get a craniotomy for the add-on room, you trade the staff that was assigned to that room for the expert staff in other rooms. Also, in our hospital, because we are a trauma center, we have core competencies everyone has to maintain.

Q What do you do about anesthesia services for the add-on room? If the room is not utilized as much as the other rooms, do anesthesiologists want to be assigned there?

Dempsey: No. But they have seen their overall throughput go up, too. If there are not enough add-on cases to put in that room, we look for a surgeon who has relatively short cases and move some of his cases to that room. That way, he can use 2 rooms, do cases back to back, and finish sooner.

Q We have orthopedic surgeons who continually want to do cases in the evening after office hours. An add-on room would not help this. What do you suggest?

Dempsey: We had the same problem. We found that despite having an add-on room, which is fairly well utilized at around 60%, we still had trouble getting hip fracture cases done because those physicians needed to be in the office during the day. No matter what we tried, they were still putting those cases on after their office hours. So we said, “We are going to organize their madness. We are going to give them a block from 5 to 9 pm for hip fractures.” So we staff it, and anesthesia staffs it. That way, the patients are not in the hospital an extra day, and we can get the cases done.

Rudolph: That increases the predictability—knowing the staffing needs so you are not scrambling or paying overtime.

Q In our hospital, we have times when the PACU is backed up because of lack of staff in the ICU and postop cardiac ICU. Then when a trauma patient comes in, there is no place to send them. Our problem is not enough nurses rather than a shortage of beds. How do you address this?

Rudolph: If you don’t have enough RNs to staff these units, then that is your capacity. Your true capacity is only as good as your staffing. You might want to look at how you are scheduling patients for the OR. You probably have historical information on this. You might find, for example, that your surgical volume ranges from 4 cases to 12 cases a day. Reducing this variation might help relieve the pressure.

Q Sometimes when we have capacity problems, the postsurgical floor gets medical patients, or vice versa. This is a dissatisfier for staff. How do you address this?

Rudolph: We recommend that medical patients have medical beds, and surgical patients have surgical beds. Understanding the demands for those patient populations is key. We need to do a better job of looking at historical information to understand what the demand is going to be. Once you better identify your demand, you can start working to manage the demand. For example, you could look at smoothing your surgical flow so you can appropriately place surgical patients into surgery beds.

Dempsey: This is one of the exercises we did in the IHI collaborative. You probably will find that your medical caseload is more predictable than your elective surgical volume, which is why it is so important to smooth the elective surgical flow.

Implementing an add-on room

An add-on OR has enabled St John’s Regional Health Center in Springfield, Mo, to manage a growing volume while keeping overtime low, allowing surgeons to get more cases done and reducing the number of add-on cases running late in the evening.

The 866-bed Level I trauma center has:

• 28 ORs (22 main OR; 6 outpatient)
• 26,000+ cases annually
• 145 surgeons

St John’s began using an add-on room for urgent and emergent cases in 2002. As a result:

• Surgical case volume increased by 5.1% between 7:30 am and 1:30 pm.
• Need for ORs at 3, 5, 7, and 11 pm decreased by 45%.
• Overtime was reduced. Current overtime percentage is 2.8%.
• Surgeon revenue increased by 4.6%.
• Nursing units are better able to predict staffing needs.
• Patient, physician, and staff satisfaction increased.

To read how St John’s implemented the add-on room, see the November 2003 OR Manager, p 12.
The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) debuts a new infection control standard this month. JCAHO says an estimated one-third of health care-associated infections could be prevented if current recommendations were followed. A Swiss study published in *Lancet* found that just a modest increase in hand hygiene compliance guidelines reduced infections by 50%.

The new standard holds top leaders accountable for providing enough resources and training for the infection control program. Because infection control is not revenue generating, it hasn’t always gotten the attention it deserves.

“The accountability is with the organization’s leaders,” said JCAHO President Dennis O’Leary, MD, in previewing the standards. “There is no opportunity to diffuse responsibility.”

Among other things, the standard says leaders must:
- make infection control a major component of the safety and performance improvement (PI) programs
- have an organizationwide infection control program
- allocate adequate resources for the program.

**What will surveyors ask staff?**

Surgical services leaders can expect questions on infection control to come up as surveyors interview front-line staff as part of the tracer method now being used in JCAHO surveys, notes Nancy Bjerke, RN, MPH, CIC, of Infection Control Associates, San Antonio, Tex.

Under the tracer method, introduced last year, surveyors select individual patients and follow their care through the process, spending much of their time talking with staff to assess compliance with the standards. Preparing the staff to all unannounced visits next year.

Bjerke’s hospital was one of the first to have a survey using the tracer method.

“It is the front-line staff who will be expected to answer questions, not the leadership,” she says. “This is how they are getting at the big programs without actually going through an interviewing process with department heads and reviewing lots of policies and procedures.”

“They may spend a long period of time in one area. They will be assessing visual cues as well as listening to the responses,” she says.

“It’s imperative for leaders to work with the front-line people and ask them, ‘What are the infection control practices you use in your area? What PI projects have you been doing that have helped patients?’”

Surveyors will also expect to see that infection control practices are consistent with national recommendations and guidelines, such as those of the Centers for Disease Control and Prevention (CDC), Association of periOperative Registered Nurses (AORN), and Association for the Advancement of Medical Instrumentation (AAMI).

In infection control PI, a major focus is the national Surgical Infection Project (SIP) led by the CDC and the Centers for Medicare and Medicaid Services. If your facility has participated in the SIP project, the staff may well be asked about these areas, Bjerke notes. Emphasis is on correct administration of prophylactic antibiotics, specifically:

- selecting the appropriate antibiotics
- administering antibiotics within 1 hour of surgery (2 hours for vancomycin)
- giving antibiotics for the correct duration (ie, discontinuing within 24 hours after surgery).

(See Resources list for references to use in preparing the staff for a survey.)

**Policy and practice**

As always, surveyors will check to see if daily practice is consistent with written policies and procedures. For example, if preoperative instructions call for patients to shower, the surveyor might ask whether the staff verifies that this is done. Surveyors might ask, for example, “What were the instructions given to the patient? Were the instructions carried out? Is this documented?”

The preoperative shower is recommended in the CDC’s guideline for surgical site infection (SSI) prevention: “Require patients to shower or bathe with an antiseptic agent on at least the night before the operative day.” This is a Category IB recommendation, meaning it is viewed as effective and worthy of implementation.

**Hand hygiene**

Hand hygiene continues to be a major emphasis of JCAHO:
- Complying with the CDC’s hand hygiene guide is a National Patient Safety Goal.
- The new Infection Control standard says “enhancing hand hygiene” must be a goal of the infection control program (IC.4.10).

The National Patient Safety Goal requires facilities to implement the CDC’s Category I hand hygiene recommendations and consider the Category II recommendations (sidebar).

Surveyors will judge compliance by interviewing the staff and directly observing hand hygiene practices. For example, a Category I recommendation is that caregivers not wear artificial nails, so surveyors would expect to see that has been carried out. (For more information, see the frequently asked questions for the National Patient Safety Goals at www.jcaho.org.)

The CDC guideline also covers surgical hand antisepsis. For the surgical scrub, many ORs now use alcohol-based hand rubs in addition to soap and water.

“One of the things surveyors might ask is, ‘What is the policy for the surgical scrub?’” Bjerke suggests. Other possible questions:
- Is there an initial soap-and-water wash with an antiseptic, as the CDC recommends?
- When the alcohol rub is used for subsequent scrubs, is it allowed to dry before donning gloves?
- Have any skin reactions been noted from the new alcohol-based products?
CDC hand hygiene guideline

These are selected recommendations related to perioperative care. See the CDC’s hand hygiene guideline for complete recommendations. JCAHO says surveyors will score all Category I recommendations under the National Patient Safety Goal for hand hygiene.

Surgical hand antisepsis

- Remove rings, watches and bracelets before beginning the surgical hand scrub. Category II
- Remove debris from underneath fingernails using a nail cleaner under running water. Category II
- Surgical hand antisepsis using either an antimicrobial soap or an alcohol-based hand rub with persistent activity is recommended before donning sterile gloves when performing surgical procedures. Category IB
- When performing surgical hand antisepsis using an antimicrobial soap, scrub hands and forearms for the length of time recommended by the manufacturer, usually 2 to 6 minutes. Long scrub times (eg, 10 minutes) are not necessary. Category IB
- When using an alcohol-based surgical hand-scrub product with persistent activity, follow the manufacturer’s instructions. Before applying the alcohol solution, pre-wash hands and forearms with non-antimicrobial soap and dry hands and forearms completely. After application of the alcohol-based product as recommended, allow hands and forearms to dry thoroughly before donning sterile gloves. Category IB

Other aspects of hand hygiene

- Do not wear artificial fingernails or extenders when having direct contact with patients at high risk (eg, those in intensive care units or operating rooms). Category IA
- Keep natural nail tips less than ¼-inch long. Category II

Category IA recommendations are strongly recommended and strongly supported by well-designed studies. Category IB recommendations are strongly recommended and supported by some studies and strong theoretical rationale. Category II recommendations are suggested for implementation.

Source: CDC. Guideline for hand hygiene in healthcare settings. www.cdc.gov/handhygiene

Disinfection, sterilization

The infection control standard requires methods to reduce risks associated with procedures, medical equipment, and medical devices (IC.4.10). That includes:
- appropriate storage, cleaning, disinfection, sterilization, and/or disposal of supplies and equipment
- reuse of equipment designated by the manufacturer as disposable in a manner consistent with regulatory and professional standards
- appropriate use of personal protective equipment.
Surveyors might ask about any of these processes if they come up during a tracer.

Surgical infection prevention

The CDC’s SSI prevention guideline has a number of recommendations related to perioperative care. Managers need to review their policies to see that they are consistent with CDC and AORN recommendations and make sure staff is familiar with these policies and carries them out, Bjerke advises.

For example, a surveyor might ask, “What is your policy for preoperative hair removal?”

The CDC SSI guideline says hair should not be removed preoperatively unless hair will interfere with the operation. If hair is removed, it should be removed immediately before the operation, preferably with electric clippers. Both are rated Category IA, which means they are strongly recommended for implementation and backed by well-designed studies.

In addition, if hair is removed, that should not be done in the operating room but in the holding area.

Prophylactic antibiotics

If your facility has conducted a PI project on prophylactic antibiotics, questions on this subject could come up.

In addition to being a focus of the national SIP project, correct use of prophylactic antimicrobials is a core measure in JCAHO’s ORYX program as well as a quality measure for the Leapfrog Group and others. A national advisory statement on prophylactic antibiotics was issued last year.

If OR nurses participate in administering the antibiotics, Bjerke says surveyors might ask, “What is the timing for giving prophylactic antibiotics?” It is recommended that antibiotics be given within 60 minutes prior to the incision for certain procedures. They might also look to see how and where the timing is documented in the patient’s record so the facility can track its progress toward improving the process.

Resources


ECRI. Hand hygiene in the healthcare setting. Healthcare Risk Control. Suppl A. 2004. 610/825-6000. e-mail hrc@ecri.org


OR, SPD staffs walk in each others’ shoes

One way an OR manager and a supply, processing and distribution (SPD) manager found to overcome an inefficient and sometimes adversarial relationship between their departments was to have their staffs walk in each others’ shoes.

As part of a quality improvement (QI) project, OR and SPD staff spent time in each others’ departments, watching and learning how tasks are accomplished. The lessons learned helped mend fences and generate ideas to improve the relationship and the process.

Within a year of the project, Joanna Roland, RN, BSN, CNOR, CNA, nurse manager of the OR at Central Texas Veterans Healthcare System, Temple, Tex, and Maleah Ordens, CRMST, chief of SPD, successfully brought together 2 departments that once operated independently and with little coordination.

By forging a collaborative relationship, the departments have been able to tackle a number of issues including moving to an automated inventory system; standardizing case carts, supplies and equipment; and adopting a consignment program.

“We should have been hand in glove, we were separate departments and didn’t understand each others’ processes,” Roland says. “In order to work together more effectively, I proposed to send my surgical technicians and RNs down to SPD and walk through their prep, decontamination, and case-cart side.”

In turn, Ordens sent SPD personnel into the OR to better understand how surgical nurses use case carts and supplies in actual operations.

“By having a better understanding of the common goal—to provide the best possible care to our veterans—our departments began a collaborative partnership,” Ordens says.

Central Texas is one of the largest of the 16 integrated health care systems in the Department of Veterans Affairs. It includes Olin E. Teague Veterans’ Center, the Waco VA Medical Center, the Thomas T. Connally VA Medical Center, and 4 outpatient clinics, for a total of about 1,063 beds.

Roland oversees 8 ORs at Central Texas, and Ordens provides SPD services to the 3 Central Texas hospitals and 5 clinics. SPD cleans, processes, stores, and distributes sterile and non-sterile supplies, instruments, and medical equipment for clinical use across all facilities and for surgical use.

Creating the team

Once Roland and Ordens decided to improve relations between the departments, they formed a QI team with employees from both departments to talk about ways to improve performance.

“We worked with those teams from the beginning. Then we took ourselves out of that role and let them work on their own,” Roland says.

“We were selective in choosing people for the team,” Ordens says. “We wanted eager beavers and people with positive energy.”

In the beginning, however, Ordens says the meetings were tense. “Nobody was sure what we could do,” she says. “We quickly realized what we could accomplish. We come to the table with open minds. There will be times when there will be disagreement. We know that the final decision will be for the good of the veteran.”

High-problem areas

Orthopedics and cataract surgery were high-problem areas.

“Neither one (OR and SPD) understood what the other was doing,” says Roland. “We cannot do our job without SPD, and they can’t do their job without surgery.”

One problem the team identified was a mysterious situation where trays on case carts were being delivered to the OR in damaged condition.

“We would have 6 of 18 trays with little holes in them. We complained to SPD that they should be catching these problems,” Roland says. “We were wasting time having to reprocess trays, which delayed operative procedures, and SPD had to duplicate work by rehandling and assembling the same trays.”

Ordens says the SPD staff felt certain they were not damaging trays during packing procedures.

“They talked about it and felt they were doing it right. They felt something must be happening when the carts went up, or later (in the OR),” she says. The OR staff went down to SPD to see how the trays were processed, and the SPD staff came to view the OR process.

In the investigation, the team discovered the source of the problem.

“We found the wire racks on the new case carts had small solder points that caused tears in the trays when they pulled the instrumentation out,” she says.

The racks were reversed on the case cart, which helped reduce the problem.

Another complaint from nurses was that the supplies on the case carts were not arranged for optimum removal, Roland says.

“Watching surgery gave (materials management) staff a better understanding of how the staff in the OR worked,” Ordens says. “We learned how to arrange the carts to make them more user-friendly.”

The teams also found that using custom packs on certain cases reduced the workload for both units and provided a more organized and less labor-intensive effort, which increased productivity.

Tom Scott, MD, who became chief of surgery in July, says he is impressed with how well the OR and SPD communicate and resolve problems.

“I have seen this unfold in different ways,” Dr Scott says. At a previous hospital, he had control over the OR and sterile services. He said he also has worked in situations like this, where services cross lines. “Here, the surgeons report to me, but the OR nurses do not. We work together in a matrix fashion. It can work well either way, or it can be dysfunctional.”

The key, Dr Scott says, is to establish clear lines of communication.

“Now the real issue is how we consolidate these gains and integrate this into our culture,” he says. “Sustaining this is the main issue. We are still reaping the benefits from more effective matrixing that they have worked out over the years.”
State bans some lap procedures in ASCs

The Pennsylvania Department of Health issued a notice Dec 2 that prohibits ambulatory surgery centers (ASCs) from performing some laparoscopic procedures, such as laparoscopic cholecystectomy.

Though these procedures are considered minimally invasive, the state says that under its regulations, invasions of the abdominal or thoracic cavities are considered “major invasions,” which are not permitted in outpatient surgery centers.

“The incisions used for laparoscopic procedures are generally smaller than those used for open procedures, but the risk of injury remains,” the health department said.

Laparoscopic hernia repairs were not included in the ban because they do not penetrate the peritoneal membrane.

“It came to our attention during routine inspections that invasive laparoscopic surgery was being done,” a department spokesman said. “We began to talking to associations and organizations through the summer. They said it was happening but was not widespread, so the department issued the notice.”

The department told the Associated Press it was not taking the action because of any serious complications or deaths in outpatient centers. But it referred to a report by the Project on Medical Liability in Pennsylvania, which found the number of malpractice claims payouts for lap chole rose in 1995-1999. The report attributed this to more lap choles being performed and a greater risk of complications because of the laparoscopic technique.

The report said lap chole have a higher “severity risk index” from the insurance industry than conventional cholecystectomies, indicating there are more injuries with the laparoscopic technique.

The report did not examine whether the procedures with claims were performed in outpatient surgery centers or hospitals.

FASA blasts decision

The Federated Ambulatory Surgery Association’s executive vice president, Kathy Bryant, blasted the ban, calling it “bad medicine” and saying the action would deny patients access to “safe and affordable care.”

FASA says 44,000 laparoscopic cholecystectomies may have been performed in surgery centers in 2003 alone. FASA says its data shows ASCs “have an excellent safety record with these procedures, with about 99% being performed without complications.”

Bryant said the health department had rejected “widely held medical opinion” of what is minimally invasive versus a “major invasion.”

She said FASA was evaluating its options and working with members to determine how many patients would be affected. Information is at www.fasa.org.

The health department said it does not have plans to reexamine the decision.

Well-oiled machine

Interdepartmental teams continue to meet to work out issues and discuss projects, Roland says. Orientation of new employees includes visits to the SPD and the OR so they can learn about operations. To increase communication, Ordens has added a full-time liaison between the 2 departments.

“We are a well-oiled machine now,” Roland says. “We hear about adversarial relationships across the nation between OR and materials management, but our staffs here work for each other. We are problem solvers.”

Among issues the interdepartmental OR/SPD quality initiative has addressed:

• Moved inventory supply purchasing and management out of the OR and into SPD. In 2002, SPD hired an inventory management specialist for the OR.

• Standardized video systems for orthopedics, urology, cardiology, and other surgery departments. Now, when a video system breaks down, replacements can be more easily found because of interchangeability.

• Established stock par levels. This helped to reduce inventory and increase cash flow.

• Helped to install and train personnel for an automated inventory system. This helped provide necessary data to reach agreement with physicians on standardization efforts.

• Implemented an inventory management system with bar coding. During the first 3 months, more than $130,000 was recovered through reduction in informal inventory, lower par levels, the ability to have a system that could flag critical par levels, and standardization.

• Adopted an orthopedic consignment program.

• Worked with physicians to standardize supplies and equipment, including surgical beds, saws, and drill systems.

“The key for physicians is having a good attitude, being flexible and open-minded,” Dr Scott says. “Surgeons are the end users, and we should have a lot of interest in the process. Leadership is important, but not so much leadership at the top. It is more important that people at all levels be leaders.”

Roland and Ordens say they believe in Robert Greenleaf’s “servant leadership” theory.

“As leaders, we need to listen to our staff because they usually know how to fix the problem and to encourage creativity and thinking outside the box,” Roland says. “Leaders need to be empathetic, rely on persuasion, and build a consensus among the team members.”

The challenge in creating a collaborative relationship between the departments, says Roland, is that managers must be able to open lines of communications.

“There was no blame assigned to issues but a strong commitment to resolve the issues,” Roland says. “It makes us stronger as an organization committed to taking care of veterans.”

—Jay Greene

Jay Greene is a freelance writer in St Paul, Minn.
Draft ASC list “mixed bag,” industry says

A proposed update of the ambulatory surgery center (ASC) list from the Centers for Medicare and Medicaid Services (CMS) received mixed reviews from the ambulatory surgery community.

The draft, posted Nov 19 on the CMS web site would add 25 procedures and delete 100 procedures from the list, which governs which procedures are eligible for a facility payment from Medicare when performed in the ASC.

The proposed list was published in the Federal Register Nov 26. Comments are due by Jan 25.

Despite the 25 proposed additions, the Federated Ambulatory Surgery Association’s executive vice president, Kathy Bryant, said FASA’s enthusiasm about the update “dissipated quickly when we realized that more codes were being deleted than were being added, resulting in Medicare beneficiaries having less access to ASCs.”

The American Association of Ambulatory Surgery Centers (AAASC) called the proposal a “mixed bag.”

Many of the proposed additions are ones ASCs have sought. But the proposed deletions include some procedures the industry says are commonly performed in ASCs.

Among codes that would be added are knee arthroscopy (29873) and repair bladder defect (57288), both of which FASA says have been performed in ASCs for patients with other types of insurance for some time.

Also in the draft are a number of procedures ASCs have been trying to add, including reconstruction of chin (21120), augmentation of lower jaw bone (21125), colonoscopy with stent (44397), and proctosigmoidoscopy with stent (45372).

But CMS declined to include many other procedures ASCs have encouraged the government to add, including ligation of hemorrhoid(s) (46221), ligation of hemorrhoids (46946), urine voiding pressure study (51795), intra-abdominal pressure test (51797), repair detached retina (67105), and treatment of retina (67145).

Many of the proposed deletions are based on recommendations of the Health and Human Services Office of Inspector General (OIG).

The recommendations are based on a study by OIG of variations in Medicare payments to hospital outpatient departments and ASCs for the same procedures. The OIG said that CMS’s failure to remove 72 codes from the ASC list was costing Medicare $8 million to $14 million.

CMS considered the OIG’s recommendations and proposed deleting 54 of the 72 codes.

Among the OIG’s rationales for deleting codes are that the procedure is performed more than 50% of the time in the physician’s office (meaning it costs Medicare more when the procedure is performed in an ASC); medical specialty organizations recommended the code be deleted for safety reasons; the procedure is performed primarily in the inpatient setting; or the OIG recommended the deletion, and CMS’s medical advisors concurred.

FASA and AAASC said they plan to challenge many of the proposed deletions.

They encouraged their members to send comments to CMS by the deadline of Jan 25. The associations also asked members to share their comments with them so they could consider the arguments in their responses to CMS.

The ASC industry is encouraging the government to take another approach to the list in a revised ASC payment system, which Congress requires CMS to implement by 2008. That revision is to be based on a report by the Comptroller General of the US, which was due by Jan 1.

AAASC says it would like to see the current ASC list, which is inclusionary, replaced by a list that instead states only the procedures Medicare would not reimburse when done in an ASC. The association believes that type of list would lead to ASCs being reimbursed for a broader range of services for Medicare patients and would make it easier for CMS to keep the list current.

The last update of the ASC list was in March 2003.

The lists of codes CMS proposes to add and delete are in the proposed rule at www.cms.hhs.gov/suppliers/asc/.

For more information, visit www.fasa.org and www.aaasc.org.
ASCs fine-tune preoperative process

Preparing patients for surgery is like conducting an orchestra—many players must come together to have a finely tuned process.

The aim is to have all of the information needed for the safe care of patients before they arrive at the ambulatory surgery center (ASC) on the day of surgery. Because physicians’ offices supply much of this information, careful coordination is needed. Here is how some ASCs manage the process.

**Develop a musical score**

The key to a harmonious process is to have criteria for preoperative evaluation developed by the ASC’s medical director and director of anesthesia. These criteria become the musical score all of the other players will follow. The criteria should identify:

- which patients need a preanesthesia evaluation before the day of surgery
- when preoperative tests are needed
- when further medical consultation is needed.

Well-thought-out criteria provide for safe care without requiring unnecessary testing. For example, which patients must have an electrocardiogram before surgery? When is blood work needed? These criteria should identify:

- testing performed selectively based on the patient’s condition and a reasonable expectation that test results will provide information that might affect care of the patient during surgery and anesthesia.
- not having highly invasive procedures.
- that issue has become complex as more types of procedures are performed in the ASC and as more patients with underlying illnesses have outpatient surgery.

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- that issue has become complex as more types of procedures are performed in the ASC and as more patients with underlying illnesses have outpatient surgery.

Though there is plenty of literature on preoperative evaluation, there are not many well-designed studies, ASA notes, leaving much room for debate and disagreement. An important resource is ASA’s Practice Advisory for Preanesthesia Evaluation (www.asahq.org/publicationsAndServices/preeval.pdf). ASA points out that this is called “advisory” because there was not sufficient literature to call it a guideline or standard. The statement provides expert opinion, but it is up to physician leaders in each facility to reach their own consensus on what is required.

**An appreciative audience**

ASCs strive for a patient-friendly process that emphasizes safe care yet is convenient for patients.

“The intent is for the physician or surgeon to order all of the necessary diagnostic studies at the time the procedure is scheduled, based on the center’s criteria, and eliminate the need for the patient to come to the center for a preop visit,” Vinson says. Any tests that are needed can be scheduled by the physician’s office with the results faxed to the surgery center.

**Assign a good conductor**

The staff in physicians’ offices are the musicians who must all play from the same score. They need a good conductor at the ASC to keep everyone playing in tune.

Lisa Cooper, RN, clinical director at El Camino Surgery Center, Mountain View, Calif, a multispecialty center with an annual volume of 10,000 cases, recommends having a preoperative coordinator who is dedicated to communicating with surgeons’ offices and making sure charts are complete. She also advises having a fax machine in the preoperative area dedicated to receiving histories and physicals (H&Ps).

El Camino’s preoperative coordinator begins assembling charts 2 weeks before surgery. A checklist is attached to the outside of the chart to keep track of what is needed. A preoperative nurse calls patients 3 days before surgery, referring to the checklist to see if anything is missing. If an electrocardiogram is ordered but not done, for instance, she can ask when the patient plans to have it done. If the patient doesn’t know about it, the nurse calls the surgeon’s office.

Asheville Surgery Center in Asheville, NC, created the position of scheduler to schedule surgery and preoperative phone calls and coordinate with the office schedulers. The 9-OR facility, which performs about 1,300 cases a month, is affiliated with Mission Hospitals.

The majority of preoperative assessments are performed by phone, and surgeons’ offices have much of the responsibility for ensuring charts are complete. When the office staff calls to schedule surgery, a time is set for a preoperative assessment phone call from the ASC.

Continued on page 28
There also is the newly created position of preoperative unit clerk, who has been invaluable in making sure all of the lab work and the H & Ps are on the patient’s chart before surgery, notes Patti Campbell, RN, BSN, preoperative and postoperative nurse manager.

More than 95% of all charts are complete the day before surgery. “It is rare for an incomplete chart to delay surgery,” she says. Vinson cautions ASC managers to make sure they have more than one staff member who is experienced with the preoperative process. She does not advise assigning the same person to this duty every day because the system can fall apart if that person is gone. Rotating the responsibility ensures that several staff members know what is required to complete a chart for surgery.

**Education for schedulers**

Asheville has been proactive in educating office schedulers and creating a good working relationship, says Joanne Taylor, RN, OR manager. Schedulers are updated frequently on any new protocols, and regular education sessions are held for them.

The center has developed packets with forms for office schedulers to complete when a patient is scheduled. The completed documents are faxed to the ASC’s unit clerk along with any preoperative orders. The unit clerk has a filing cabinet dedicated to surgeons’ preoperative paperwork.

Good coordination with offices is also important for cost-effective materials management, Taylor adds. The center uses custom packs, which must be ordered as needed from an off-site distribution center. Having the patient’s chart completed in a timely manner is necessary so the correct supplies can be ordered. Presently, Asheville is educating office schedulers about a new intraocular lens protocol. Because the center has reduced its lens inventory, office schedulers must request the lens that will be needed on the day of the patient’s office exam. Taylor says the facility has saved several hundred thousand dollars this past year by streamlining supplies.

“A big part of this has been our ability to get the doctors’ offices to let us know way ahead of time what procedure will be done and what supplies will be needed,” she says.

**Thinking outside the box**

Vinson has developed a 2-page ambulatory surgery preadmission questionnaire for Acumen’s centers to provide to physicians’ offices. In addition, she translates each center’s preoperative evaluation criteria into easy-to-follow instructions for the office staffs. The office staff completes the questionnaire when the patient is scheduled for surgery and faxes it to the ASC. The questionnaire includes a section where any needed lab tests can be listed. Patients then can have this lab work completed when convenient before surgery, and the office staff can fax the results to the ASC.

The preadmission form allows the ASC’s nurses to identify information ahead of time that could affect a patient’s care on the day of surgery, such as knowing that the patient is in a wheelchair, is obese, or is on dialysis. For example, when the staff learns 2 weeks before surgery that a patient is on dialysis, they can more easily arrange for the patient to have dialysis just before surgery. Not knowing about the need for dialysis until the day before surgery can cause the case to be delayed.

Communication between offices and the ASC can break down if the ASC staff worries more about having a specific form than the information that is needed, Vinson comments. For example, the ASC staff might insist that the surgeon use a specific form for the history and physical, even though the surgeon’s progress notes copied from the patient’s office chart has the needed information.

In the Acumen centers that use this process, Vinson says 85% of patients have the preoperative assessment completed without coming to the center before the day of surgery. Success is based on how willing the office staff and ASC staff are to be flexible and think outside the box, she says.

“If the ASC staff gets hung up on forms versus the information, the office staff are going to be reluctant to implement the new process, and the ASC staff will be reluctant to facilitate it.”

Relationships with physicians’ offices take constant nurturing, Vinson notes. She adds that coordination of the preoperative process with physicians’ offices can be a good subject for quality improvement studies. For example, if there seems to be a rise in incomplete paperwork or delays and cancellations because patients aren’t prepared, the ASC manager could set up a simple form to track these deficiencies by surgeon’s office. If a pattern develops, the manager could organize an informal QI team to look into the situation and identify the cause. Perhaps the office has a new scheduler who is not completely oriented or has run out of preoperative packets. Once the gap in the process is identified, the situation can be addressed, and the orchestra can be playing back in tune.

—Judith M. Mathias, RN, MA
—Pat Patterson
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JCAHO seeks comments on med management standards

Comments are due by Jan 10 for the Joint Commission on Accreditation of Healthcare Organizations proposed revision of medication management standards.

Among other things, the draft addresses risks associated with medications used as part of a procedure, regardless of whether there is a specific order for the medications. The standards would apply to hospitals, ambulatory care organizations, office-based surgery facilities, and other accredited organizations.


How are we doing on patient safety?

Five years after the much-cited Institute of Medicine report on medical errors, a patient safety expert gives efforts to improve safety a C+. There’s been some progress but not enough, writes Robert M. Wachter, MD, of the University of California, San Francisco. He grades 5 areas for their contributions to the progress that has been made:

Regulation—A: The Joint Commission, in particular, has been a driver of patient safety.

Error-reporting systems—C: Reporting still lags, and not enough has been done to digest the reports that have been collected.

Information technology—B: There has been an up-tick in clinical information system implementation, but information systems can cause problems of their own.

The malpractice system—D+: The system is “terribly broken” and does a “poor job of compensating patients, punishing the negligent, and protecting the innocent.”

Workforce and training issues—B: There’s more recognition that workforce issues are important to safety, and there’s been some action, such as the emergence of hospitalists and attention to the nursing shortage. The Nov 30 report was issued by the journal Health Affairs.

—www.healthaffairs.org

Johnson & Johnson in talks with Guidant

Johnson & Johnson is in advanced negotiations to acquire Guidant, one of the nation’s largest makers of heart and circulatory devices, The New York Times reported Dec 7. The deal would give Johnson & Johnson “a strong foothold in the fast-growing market for products like defibrillators and pacemakers,” the report said. Guidant is a strong second in the market to Medtronic. The deal also would strengthen J & J’s position in the multibillion-dollar stent market.


Skin adhesive equal to sutures in study

A topical skin adhesive is equivalent to sutures and other traditional wound closure methods for long surgical incisions, according an international clinical study published in the American Journal of Surgery.

The prospective, randomized, multispecialty study with 209 patients compared Ethicon’s high-viscosity DermaBond with other wound closure devices including sutures, staples, and the original Dermabond adhesive.

The study involved 6 specialties, including plastic, general, maxillofacial, neuro, OB/GYN, and thoracic surgery. The research was supported by Ethicon.


Will noninvasive heart valve procedures take over?

Transcatheter heart valve replacement is on the horizon, and advocates are saying it could one day become the standard of practice, replacing some surgery. So far, only about 100 patients worldwide have had pulmonary, aortic, or mitral valves repaired or replaced using percutaneous methods, a news article in the Dec 1 JAMA reports. Currently, about 90,000 open-heart valve procedures are performed in the US each year, and demand is expected to grow by 5% to 9% a year as the population ages. Manufacturers are working on new devices for the procedure. One device, made by Evalve Inc, Redwood City, Calif, is a tiny clip that is implanted percutaneously to secure leaflets in the mitral valve and prevent blood leakage.

The enthusiasm is tempered by others who say it’s too soon to know if the results will support the excitement.